N

MD 450 IS ASSUMED TO RUN IN EAST-WEST DIRECTION

EXISTING SIGNALS TO REMAIN

1,4 — 12"/8"

2,5 — 12"

3,6,7,9,10,11,12 — 12"

a,b,c,d — EXISTING VIDEO DETECTION

e — EXISTING OPTICOM

EXISTING SIGNALS TO BE REMOVED

8a — 12"

PROPOSED SIGNALS

8 — 12"

13,14,15,16 — 16" LED COUNTDOWN PEDESTRIAN SIGNAL

EXISTING SIGNS

21 — EAST MARYLAND 450

22 — WEST MARYLAND 450

26 — WEST MARYLAND 450

27 — EAST MARYLAND 450

EXISTING SIGNS TO REMOVE

20 — Highbridge RD

19 — LEFT TURN YIELD ON GREEN

25a — ONLY

PROPOSED SIGNS

28a — ← High Bridge RD

28 — High Bridge RD → (DUAL FACED)

33 — R3-6(R) (30"x36")

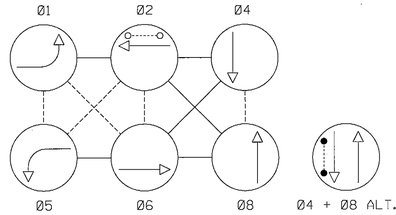
25,30 — ONLY — R3-5(L) (30"x36")

29 — Church RD →

29a — ← Church RD (DUAL FACED)

31,32 — Annapolis RD — D-3(1) (VAR.X16")

NEMA PHASING



NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

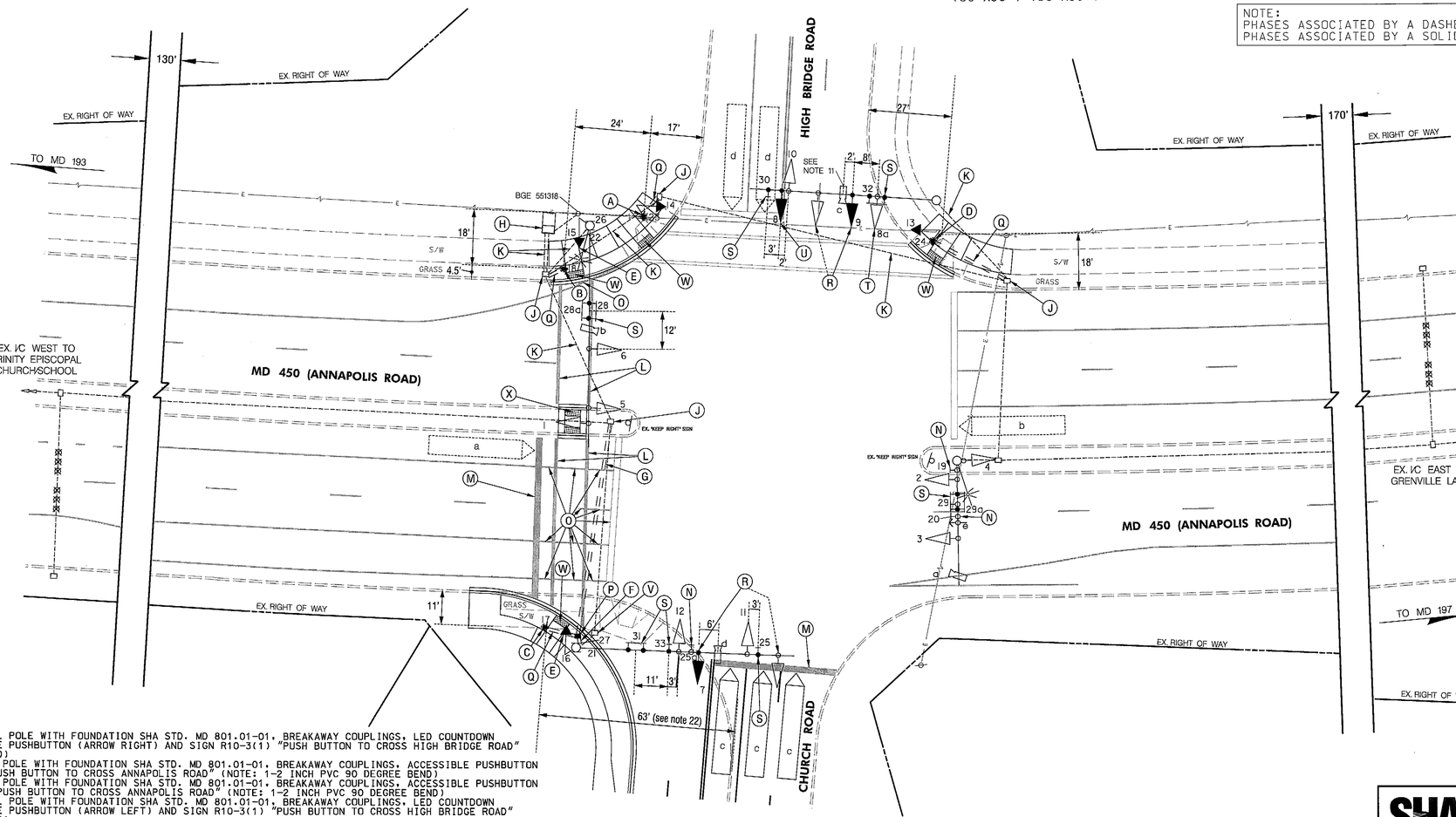
PROPOSED ACCESSIBLE PUSHBUTTON AND SIGN

24 — PUSH BUTTON TO CROSS HIGH BRIDGE ROAD — START CROSSING Watch for Turning Vehicles — DON'T START Finish Crossing If Started — TIME REMAINING To Finish Crossing — PEDESTRIANS SHOULD NOT BE IN CROSSWALK — HIGH BRIDGE ROAD IN BRAILLE TYPE 2 — R10-3(1) 9"x15"

18 — PUSH BUTTON TO CROSS ANNAPOLIS ROAD — START CROSSING Watch for Turning Vehicles — DON'T START Finish Crossing If Started — TIME REMAINING To Finish Crossing — PEDESTRIANS SHOULD NOT BE IN CROSSWALK — ANNAPOLIS ROAD IN BRAILLE TYPE 2 — R10-3(1) 9"x15"

17 — PUSH BUTTON TO CROSS ANNAPOLIS ROAD — START CROSSING Watch for Turning Vehicles — DON'T START Finish Crossing If Started — TIME REMAINING To Finish Crossing — PEDESTRIANS SHOULD NOT BE IN CROSSWALK — ANNAPOLIS ROAD IN BRAILLE TYPE 2 — R10-3(1) 9"x15"

23 — PUSH BUTTON TO CROSS HIGH BRIDGE ROAD — START CROSSING Watch for Turning Vehicles — DON'T START Finish Crossing If Started — TIME REMAINING To Finish Crossing — PEDESTRIANS SHOULD NOT BE IN CROSSWALK — HIGH BRIDGE ROAD IN BRAILLE TYPE 2 — R10-3(1) 9"x15"



CONSTRUCTION DETAILS

A. INSTALL 10 FOOT BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01, BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW RIGHT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS HIGH BRIDGE ROAD" (NOTE: 1-2 INCH PVC 90 DEGREE BEND)
B. INSTALL 5 FOOT BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01, BREAKAWAY COUPLINGS, ACCESSIBLE PUSHBUTTON (ARROW LEFT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS ANNAPOLIS ROAD" (NOTE: 1-2 INCH PVC 90 DEGREE BEND)
C. INSTALL 5 FOOT BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01, BREAKAWAY COUPLINGS, ACCESSIBLE PUSHBUTTON (ARROW RIGHT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS ANNAPOLIS ROAD" (NOTE: 1-2 INCH PVC 90 DEGREE BEND)
D. INSTALL 10 FOOT BREAKAWAY PEDESTAL POLE WITH FOUNDATION SHA STD. MD 801.01-01, BREAKAWAY COUPLINGS, LED COUNTDOWN PEDESTRIAN SIGNAL HEAD, ACCESSIBLE PUSHBUTTON (ARROW LEFT) AND SIGN R10-3(1) "PUSH BUTTON TO CROSS HIGH BRIDGE ROAD" (NOTE: 1-2 INCH PVC 90 DEGREE BEND)
E. INSTALL LED COUNTDOWN PEDESTRIAN SIGNAL HEAD ON EXISTING SIGNAL POLE
F. INSTALL 3 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED) (SEE NOTE 20)
G. INSTALL 4 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (BORED)
H. USE EXISTING BASE MOUNTED CABINET AND CONTROLLER
J. USE EXISTING HANDHOLE
K. USE EXISTING CONDUIT
L. INSTALL 12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (FOR CROSSWALK)
M. INSTALL 24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES (FOR STOPLINE)
N. REMOVE OVERHEAD SIGN

UTILITY LEGEND

SD — SD	STORM DRAIN
G — G	GAS MAIN
W — W	WATER MAIN
S — S	SEWER MAIN
E — E	ELECTRIC CABLES
A — A	AERIAL CABLES
T — T	TELEPHONE CABLES
F — F	FIBER-OPTIC

CONSTRUCTION DETAILS (CONT.)

O. REMOVE EXISTING PAVEMENT LINE MARKINGS
P. INSTALL ELECTRICAL HANDHOLE
Q. INSTALL 2 INCH SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT (TRENCHED)
R. RELOCATE EXISTING VEHICULAR TRAFFIC SIGNAL HEAD
S. INSTALL OVERHEAD SIGN
T. REMOVE VEHICULAR TRAFFIC SIGNAL HEAD
U. INSTALL LED VEHICULAR TRAFFIC SIGNAL HEAD
V. ELECTRICAL HANDHOLE TO BE REMOVED BY CLASS II EXCAVATION (CAP CONDUIT AS NECESSARY)
W. INSTALL COMBINATION SIDEWALK RAMP MD STD. 655.13 (SEE NOTE 8)
X. INSTALL RAMPED MEDIAN OPENING MD STD. 655.22 (SEE NOTE 8)

GEOMETRIC LEGEND

EXISTING
PROPOSED

GENERAL NOTES

1. THE CONTRACTOR SHALL CONTACT MISS UTILITY TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO THE INSTALLATION OF PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING MDSHA STANDARD PLATES FOR TRAFFIC CONTROL.
3. THE SHA SIGNAL SHOP WILL BE RESPONSIBLE FOR ALL INTERNAL CABINET WIRING AND VIDEO PROGRAMMING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING AND PROPERLY LABELING ALL SIGNAL CABLES.
4. WITHIN 36 IN. OF UNDERGROUND UTILITY LOCATIONS, THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE FOR FOUNDATION AND CONDUIT BY HAND.
5. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MDSHA STANDARDS.
6. THE CONTRACTOR SHALL VERIFY THE PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
7. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, AND MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
8. PROPOSED GEOMETRIC MODIFICATIONS (ROADWAY WIDENING, MEDIAN CONSTRUCTION, PEDESTRIAN RAMPS, AND DETECTABLE WARNING SURFACES) WILL BE CONSTRUCTED BY THE ROADWAY CONTRACTOR. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE WITH THE ROADWAY CONTRACTOR AS NECESSARY.
9. THE CONTRACTOR SHALL REMOVE ALL ABANDONED ELECTRICAL CABLE.
10. THE CONTRACTOR SHALL CENTER THE PROPOSED CROSSWALKS ON NEW CONSTRUCTED RAMPS.
11. THE SHA SIGNAL SHOP WILL REALIGN VIDEO CAMERA 'C' TO ACCOUNT FOR NEW SOUTH LEG GEOMETRY.
12. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2; AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE." IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL THE CONFLICT HAS BEEN RESOLVED. IF NEEDED, A DESIGN WAIVER SHALL BE OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
13. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR FROM A 60 IN.x 60 IN. LEVEL LANDING AREA AND DOES NOT HAVE TO REACH MORE THAN 18 IN. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
14. THE 10 FT. MINIMUM SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER OF POLE TO CENTER OF POLE.
15. PUSHBUTTON ARROWS ARE TO BE TURNED PARALLEL TO THE CROSSWALK FOR WHICH THEY ARE INTENDED.
16. ALL TRAFFIC SIGNAL MODIFICATIONS SHALL BE CONSTRUCTED PRIOR TO SIDEWALK INSTALLATION.
17. THE CONTRACTOR SHALL REMOVE AND REPLACE CONCRETE SIDEWALK AT THE NEAREST JOINT.
18. THE CONTRACTOR SHALL INTEGRATE PROPOSED CONCRETE FOUNDATIONS WITH NEW SIDEWALK /RAMPS WHERE NECESSARY. THE FOUNDATIONS SHALL BE FLUSH WITH AND PART OF THE FINAL CURB OR SIDEWALK GRADE TO INCREASE ACCESSIBILITY OF PUSHBUTTONS.
19. THE CONTRACTOR SHALL INSTALL ALL CONDUIT PRIOR TO SIDEWALK AND RAMP IMPROVEMENTS.
20. THE CONTRACTOR SHALL CUT AND CAP EXISTING CONDUIT AND REWIRE SIGNAL FACILITIES USING THE PROPOSED 3 INCH CONDUIT FROM THE NEW HANDHOLE AND THE EXISTING 3 INCH CONDUIT BEND IN THE SIGNAL STRUCTURE.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A PEDESTRIAN DETOUR AS DIRECTED BY THE ENGINEER.
22. THE CONTRACTOR SHALL SET LOCATION OF PROPOSED SIGNAL POLES PRIOR TO REMOVAL OF EXISTING GEOMETRY.

NOTE:

THESE PLANS ARE APPROVED FOR CONSTRUCTION FOR A PERIOD OF ONE (1) YEAR. SHOULD CONSTRUCTION NOT BEGIN WITHIN THIS TIME FRAME, THESE PLANS SHALL BE NULL AND VOID WITH A RE-REVIEW REQUIRED FROM THE TRAFFIC ENGINEERING DESIGN DIVISION.

EAPD PERMIT NO._____

LENHART TRAFFIC CONSULTING
TRAFFIC ENGINEERING & TRANSPORTATION PLANNING
331 Redwood Grove Court Millersville, Maryland 21108
Tel: (410) 987-3888 Fax: (443) 782-2288

APPROVALS

TEAM LEADER
ASST. DIV. CHIEF
DIVISION CHIEF ORIGINALS ON FILE
OFFICE DIRECTOR

REVISIONS

D	SIGNAL MODIFICATION DUE TO WIDENING OF SOUTH LEG AND APS NORTH AND WEST LEG BW/SSK/BZ TIMS K908	7/2011
C	SIGNAL MODIFICATION DUE RECONSTRUCTION OF MD 450	10/2001
B	INSTALL OPTICOM DETECTOR EYE MD MD 450	6/98

PLOTTED: Tuesday, July 12, 2011 AT 11:13 PM

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 450 (ANNAPOLIS ROAD) AT
HIGH BRIDGE ROAD

SIGNALIZATION PLAN SHEET

SCALE 1" = 20' DATE OCTOBER 2001 CONTRACT NO. PG9005571

DESIGNED BY _____ COUNTY PRINCE GEORGE'S
DRAWN BY MB LOGMILE 16045010.42
CHECKED BY STB TIMS NO. D538
F.A.P. NO. _____ TOD NO. _____

TS NO. TS-3193D | DRAWING SG-01 OF 02 | SHEET NO. OF